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TSALYUK, M.; YUDENKOV, I.

Ultrasonic soldering iron. Radio no.5:54-55 My '58. (MIRA 11:4)
(Solder and soldering--Equipment and supplies)
(Ultrasonic waves--Industrial applications)

SHMIGOL', Nikolay Nikitovich [Shmyhol', M.]; TSALYUK, M., red.;
LEVCHENKO, O., tekhn.red.

[Economic achievements of the building of socialism in
People's China] Ekonomichni uspihky sotsialistychnoho
budivnytstva v narodnomu Kytai. Kyiv, Derzh.vyd-vo
polit.lit-ry URSR, 1960. 147 p. (MIRA 13:2)
(China--Economic conditions)

TSALYUK, I.I.
AUTHOR: Tsalyuk, M., Yudenkov, I.

107-58-5-28/32

TITLE: Ultrasonic Soldering Device (Ul'trazvukovoy payal'nik)

PERIODICAL: Radio, 1958, Nr 5, pp 54 - 55 (USSR)

ABSTRACT: The ultrasonic laboratory of the Kiyevskiy Ges-2 (Kiyev Ges-2) designed an ultrasonic device for soldering parts of aluminum and its alloys with soft soldering materials. The application of a new excitation system permitted a considerable simplification of the generator and the design of the soldering device as a whole, as compared to other similar instruments. The basic part of the device, the magnetostriction vibrator, is shown in figures 2 and 3. It consists of a converter, a connector and a copper rod. The vibrator has a resonance frequency of 20 kilocycles and over its length, three standing half-waves can be spread. Figure 5 shows the resonance curve of the vibrator. The automatic trimming of the generator is effected without electromechanical converters, which simplified considerably the design of the generator and increased its reliability. Figure 6 shows the circuit diagram of the generator. It consists of a push-pull amplifier with two "6P3S" tubes. The coil of the magnetostriction vibrator serves as load of the

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Ultrasonic Soldering Device

107-58-5-28/32

generator. The generator is enclosed in a housing of 210 x 110 x 60 mm, mounted in a metal box of 330 x 230 x 110 mm which also contains a tinning tank and storage room for the vibrator. The total weight of the instrument is 4.8 kg. There are six figures.

AVAILABLE: Library of Congress

Card 2/2

TERENT'YEV, V.S., kand.tokhn.nauk; TSALYUK, M.B., inzh.

New high-speed unit for cross cutting. Sbor. st.
NIITIAZHEMACHa Uralmashzavoda no.6:128-139 '65.

(M RA 18:11)

TSALYUK, M.B., inzh.

Investigating the cause of the scattering in length of mill
packs cut by flying shears. Sbor. st. NIITIAZHMAChA
Uralsmashzavoda no.6:255-259 '65.

(MIRA 18:11)

TERENT'YEV, Vasilii Stepanovich; TSALYUK, Matus Borisovich;
BENYAKOVSKIY, M.A., retsenzent; PONOMAREV, V.A., red.;
FARSHAYT, Ye.D., red.; SMCROBOGACHEVA, A.P., red. izd-
va; TURKINA, Ye.D., tekhn. red.

[Thin sheet finishing mills] Ad"iustazh tonkolistovykh
stanov; otdelochnye mashiny. Sverdlovsk, Gos. nauchno-
tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii,
1961. 344 p. (MIRA 15:2)
(Rolling mills--Equipment and supplies)

TSALYUK, M.N., starshiy inzhener

Influence of rayon sizing on the crepe effect of the fabric. Tekst.prom. 20 no.5:50-51 My '60.
(MIRA 13:8)

1. Tkatskaya laboratoriya kombinata "Krasnaya Rosa".
(Sizing(Textile)) (Rayon)

TSALYUK, M.N., inzh.; MAKEYEVA, L.P., inzh.

Moss crepe warping from cones. Tekst. prom. 19 no.11:42-43 II '59.

(MIRA 13:2)

(Warping machines) (Rayon)

23060 S/13/01/005/004/001/00
A056/A101

12310

AUTHOR: Tsalyuk, M. V.

TITLE: Ultrasonic device for tinning and soldering of aluminum

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 4, 1961, 45, abstract 4E311
(V sb. "Primeneniye ul'trazvuk. kolebaniy dlya issled. svoystv kontrolya kachestva i obrabotki metallov i splavov" - Kiev, AN UkrSSR, 1960, 97-100)

TEXT: The author examines the problems of ultrasonic soldering of aluminum, the requirements demanded of the ultrasonic solderers, and surveys existent industrial ultrasonic solderers. He describes in detail the soldering unit Y3П4-5 (UZPU-5 - Ultrasonic soldering apparatus) worked out by the laboratory of ultrasonics of the Kiev [ЭС-2 (GES-2) [Abstracter's note: "State Electric Power Plant"]]. The device is composed of an ultrasonic solderer, a tinning bath and an electric generator common to both. The automatic fine tuning of frequency is not obtained by electro-mechanical converters, but by the switching on of a magnetostriction vibrator of the solderer in the positive feedback circuit. All the circuits of the generator and the polarization set of the vibrator are fed on a-c mains, originating discontinuous oscillations of
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Ultrasonic device for tinning and soldering ...

28060 S/137/61/000/004/020/033
A056/A101

frequency ~ 20 kc/s with a pulse-repetition interval of $1/50$ sec. Characteristics of transformers are given. The unit is characterized by a greater compactness, a minimum weight, a small bulk and a low price.

V. P.

X

[Abstracter's note: Complete translation]

Card 2/2

TSALYUK, Mark Yakovlevich, kand. istor. nauk; NEKRASOVA, L.S., red.;
MIL'KIN, Yu., tekhn. red.

[State farm development in the Ukraine, 1921-1930] Radhospne bu-
divnytstvo na Ukraini, 1921-1930 rr. Kyiv, Derzh. vyd-vo polit.
lit-ry URSR, 1961. 113 p. (MIRA 14:9)
(Ukraine--State farms)

AZBELEV, N.V.; SMOLIN, I.M.; TSALYUK, Z.B.

Approximate method for the derivation of the Cauchy function. Dokl.
AN SSSR 135 no.3:511-514 N '60. (MIRA 13:12)

1. Izhevskiy mekhanicheskiy institut. Predst. akad. S.L.Sobolevym.
(Functional analysis)

AZHELEV, N.V.; KALYUB, A.B.

Uniqueness of a solution to an integral equation. Dokl.
AN SSSR 196 no. 2:119-222. My 1966. (MIRA 14:7)

1. Izhevskiy mekhanicheskiy institut i Udmurtskiy gosudarstvennyy
pedagogicheskiy institut. Irkutskaya akademiya L.S. Partskalya.

L 21120-66 EWT(d) LJP(c)

ACC NR: AP6011984

SOURCE CODE: UR/0376/65/001/004/0431/0438

AUTHOR: Azbelev, N. V.; Tsalyuk, Z. B.ORG: Izhevsk Mechanical Engineering Institute (Izhevskiy mekhanicheskiy institut)TITLE: Question of a differential inequalitySOURCE: Differentsial'nyye uravneniya, v. 1, no. 4, 1965, 431-438

TOPIC TAGS: differential equation, Volterra equation, vector function, linear equation

ABSTRACT: The authors, on the basis of assertions concerning an integral inequality, present a solution to N. N. LUZIN's problem of a differential inequality for equations of a higher order than the first. They consider the system of Volterra equations

$$x(t) = \int K(t, s, x(s)) ds + \psi(t), \quad (1)$$

where vector function $K[t, s, x] = \{K_i(t, s, x_1, \dots, x_n)\}$, $i = 1, \dots, n$ is defined, given $0 \leq s \leq t < T$, $\|x\| < c$, and vector function $\psi(t)$ is continuous in $[0, T)$ and $\|\psi\| < c$. In an earlier article the authors proved a series of assertions regarding system (1), assuming that $K[t, s, x]$ satisfies Caratheodory's conditions. The results of the earlier article are formulated as the following theorem:

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Theorem 1. Let $K[t, s, x]$ be nondecreasing for x . Then a) System (1) has an upper \bar{u} and a lower \underline{u} solution; i.e., solutions such that $\bar{u} \geq u \geq \underline{u}$ for any solution u ; the upper and lower solutions can be continued to the boundary of the region of definition of K .

b) If $\bar{u}(t)$ is defined in $[0, T]$, then in this interval the integral inequality

$$\varphi(t) = z(t) - \int_0^t K(t, s, z(s)) ds + \psi(t) > 0 \quad (\varphi(t) < 0)$$

involves the inequality $z \geq \underline{u}$ ($z \leq \bar{u}$). Moreover, if $\varphi > 0$ ($\varphi < 0$), given $t \in (0, T)$, then $z > \underline{u}$ ($z < \bar{u}$) in $(0, T)$.

The article considers the assertion resulting from Theorem 1 on the existence of an upper and a lower solution and on a differential inequality for the nonlinear equation

$$N[y] = y^{(n)} - f(t, y, \dots, y^{(r)}) = 0,$$

$$y^{(k)}(0) = 0, \quad k = 0, \dots, n-1, \quad r \leq n-1.$$

Several nonlinear theorems are presented on a differential inequality. These are comparison theorems: for equation $N[y] = 0$ a theorem is valid in the given interval $[0, T]$ (the so-called "interval of applicability" of CHAPLYGIN's theorem) if an assertion on the differential inequality for the linear equation $L[y] = 0$, corresponding to condition L_1 , is valid in this interval. Effective criteria are suggested for preserving the sign of Cauchy's function and its derivatives.

Orig. art. has: 13 formulas. [JPRS]

SUB CODE: 12 / SUBM DATE: 04Jan65 / ORIG REF: 012 / OTH REF: 001

Card 2/2 dda

AZBELEV, N.V.; KHOKHRYAKOV, A.Ya.; TSALYUK, Z.B. (Izhevsk)

Theorems on differential inequality for boundary value problems.

Mat. sbor. 59 (dop.):125-144 '62.

(MIRA 16:6)

(Boundary value problems)

AZBELEV, H.V.; TSALYUK, Z.B.

Iteration methods for the solving of differential equations.
Izv.vys.ucheb.zav.; mat. no.1:21-23 '57. (MIRA 12:10)

1. Izhevskiy mekhanicheskiy institut.
(Differential equations)

67093

SOV/44-59-1-873

16(4) 16.4500, 16.4100

Translation from : Referativnyy zhurnal. Matematika, 1959, Nr 1, p 169 (USSR)

AUTHOR: Tsalyuk, Z.B.

TITLE: Remarks on an Estimation of L.V. Kantorovich

PERIODICAL: Uch.zap.Udmurtsk.gos.ped.in-ta, 1957, vyp 11, 127-128

ABSTRACT: The estimation of L.V. Kantorovich for the error of the approximate solution of the integral equation

$$(1) \quad \varphi(x) - \lambda \int_a^b K(x,t) \varphi(t) dt = f(x)$$

which is obtained by solving a system of linear algebraic equations instead of (1), has the disadvantage that it does not permit to determine the number of system equations for a presupposed exactness. The author gives an error estimation which is free of this deficiency but only holds for sufficiently small λ . The result is formulated in

the following theorem: If $\Lambda = 1 - |\lambda| (b - a) M^{(0)} > 0$, then it is

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Remarks on an Estimation of L.V. Kantorovich

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$$|\varphi(x) - \bar{\varphi}(x)| \leq |\lambda| k_n \frac{P_3 \Lambda + Q_s N(0)}{\Lambda^2}$$

(here the denotations are the same as in the book of L.V. Kantorovich and V.I. Krylov "Approximation Methods of Higher Analysis", 1952, 110 - 121) .

B.N. Babkin

Card 2/2

LOGUNOV, A.I.; TSALYUK, Z.B. (Izhevsk)

Uniqueness of solutions to Volterra type integral equations with
delayed argument. Mat. sbor. 67 no.2:303-309 Je '65.

(MIRA 18:8)

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68013

16(1) 16.4600

SOV/155-58-6-14/36

AUTHORS: Azbelev, N.V., Tsalyuk, Z.B.TITLE: On an Application of the Fixed Point Principle to Operators Given in a Semiregulated Space

PERIODICAL: Nauchnyye doklady vysshey shkoly. Fiziko-matematicheskkiye nauki, 1958, Nr 6, pp 96-98 (USSR)

ABSTRACT: The authors use notions and notations from [Ref 2]. Let F be a closed and bounded set of the KV-linear X . Let P and Q be operators defined on F and the values of which lie in X .

Theorem 1: Let the following conditions be satisfied:

a.) $P(u) + Q(v) \in F$ for $u, v \in F$ b.) P and Q are monotonec.) P is completely continuous; for arbitrary $u, v \in F$ it holds $\|Q(u) - Q(v)\| \leq \alpha \|u - v\|$, $\alpha < 1$.Let $z \in F$ and $z \geq P(z) + Q(z)$ (and $z \leq P(z) + Q(z)$ respectively). Then the equation $y = P(y) + Q(y)$ possesses a solution y , such that $z \geq y$ (and $z \leq y$ respectively).

Theorem 2 is a modification of theorem 1 which is easier for some applications. ✓

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On an Application of the Fixed Point Principle
to Operators Given in a Semiregulated Space

SOV/155-58-6-14/36

The authors mention M.A. Krasnosel'skiy and Chaplygin.
There are 5 Soviet references.

ASSOCIATION: Izhevskiy mekhanicheskiy institut (Izhevsk Mechanical
Institute)

SUBMITTED: August 6, 1957 (Uspekhi matematicheskikh nauk)
October 24, 1958 (Nauchnyye doklady vysshey shkoly. Fiziko-
matematicheskiye nauki) ✓

Card 2/2

AUTHORS: Asbelov, N.V., Tsalyuk, Z.B., and Chinchkin, E.S. SOV/140 58-2-1/20

TITLE: On the Non-Oscillation of the Solutions of Second Order Non-Linear Equations (O neostsillyatsii resheniy nelineynykh uravneniy vtorogo poryadka)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy Ministerstva vysshego obrazovaniya SSSR, Matematika, 1958, Nr 2, pp 3-4 (USSR)

ABSTRACT: The authors consider conditions under which the difference of two arbitrary solutions of

$$(1) \quad y'' = f(x, y)$$

has not more than one zero on the given interval (a, b). With the notations of the paper of Asbelov and Tsalyuk [Ref 1] the authors formulate and prove two theorems in which the problem for (1) is reduced to the same problem for $y'' - qy = 0$, where q is a certain constant depending on f(x, y). The results of [Ref 1] are used essentially.

There are 2 Soviet references.

ASSOCIATION: Izhevskiy mekhanicheskiy institut (Izhevsk Mechanical Institute)

SUBMITTED: November 28, 1957

Card 1/1

L 45250-65 SWT(d) IJP(e)
ACCESSION NO: AP500755'

3/20/65 1-60/005/1007 1008

Author: [unclear], A. D. Myshkis, Z. B.

Subject: [unclear]

NOPI TAGS: differential equation, influence equation

Abstract: [unclear] and proving a result of A. D. Myshkis DMN, 1.

[unclear]

ASSOCIATION: none

SUBMITTED: 27Mar65

NO REF SOV: 002

Card 1/1

ENCL: 00

OTHER: 000

SUB CODE: MA

AZBELEV, N.V.; TSALYUK, Z.B. (Izhevsk)

Chaplygin's problem [with summary in English]. Ukr.mat.zhur.
10 no.1:3-12 '58. (MIRA 11:4)
(Operators (Mathematics) (Differential equations))

AZBELOV, N.V.; TSALYUK, Z.B.; CHICHKIN, Ye.S.

Nonoscillations of solutions of nonlinear equations of the second
order. Izv. vys. ucheb. zav.; met. no.2:3-4 '58. (MIRA 11:5)

1. Izhevskiy mekhanicheskiy institut.
(Differential equations)

16(1)

AUTHORS: Azbelev, N.V., Rakhmatullina, L.F., and
Tsalyuk, Z.B.

SOV/155-58-2-1/47

TITLE: On the Extension of the Solution of the Problem of Chaplygin Beyond
the Limits of Application of the Theorem on Differential In-
equations (O rasprostraneni resheniya zadachi Chaplygina za
granitsu primenimosti teoremy o differentsialnykh neravenstvakh)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Fiziko-matematicheskiye nauki,
1958, Nr 2, pp 3-5 (USSR)

ABSTRACT: If on the interval $[a, b]$ a linear differential equation is given
and if y is a solution satisfying the Cauchy initial conditions
in the point a , then the difference $z-y$, where z is the comparison
function of Chaplygin, in general is of constant sign only on
 $[a, c] \subset [a, b]$. The authors use the results of Azbelev [Ref 3, 5] and
Tsalyuk [Ref 4] and establish conditions under which $[a, c] \equiv [a, b]$.
A similar result is obtained for systems of differential equations.
There are 9 references, 7 of which are Soviet, 1 Polish, and
1 Hungarian.

ASSOCIATION: Izhevskiy mekhanicheskiy institut (Izhevsk Institute of Mechanics)
SUBMITTED: December 13, 1957

Card 1/1

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C111/C222

16.3400

AUTHORS: Azbelev, N.V., and Tsalyuk, Z.B. (Izhevsk)

TITLE: On the Question on the Distribution of Zeros of the Solutions of a Linear Differential Equation of Third Order |6

PERIODICAL: Matematicheskii sbornik, 1960, Vol.51, No.4, pp.475-486. X

TEXT: Let

$$(1) \quad L[y] \equiv y''' + p_2(x)y'' + p_1(x)y' + p_0(x)y = 0$$

and let $L^*[y]$ be the adjoint operator. Let the coefficients of L and L^* be continuous on $[a, \infty)$. Two neighboring zeros of the solution y of (1) are called (i, k) -neighboring if they have at least the multiplicities i and k . Let $r_{ik}(t)$ be defined by the fact that on $[t, r_{ik}(t))$ there lies a pair of (i, k) -neighboring zeros and on $[t, r_{ik}(t) + \xi)$ there lies at least one pair of (i, k) -neighboring zeros. The authors reduce the question for the existence and distribution of the (i, k) -neighboring zeros of (1) to the problem of Chaplygin (Ref.4,5,6) and prove 6 lemmas, 6 theorems and some conclusions, e.g.:

Theorem 3: $r_{22}(t) = \max [r_{12}(t), r_{21}(t)]$.

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On the Question on the Distribution of Zeros of the Solutions of a
Linear Differential Equation of Third Order

Let $[t, r(t))$ be the maximal interval $[t, c)$ in which every non-trivial
solution of (1) has at most 2 zeros. ✓

Theorem 2: $r(t) = \min [r_{12}(t), r_{21}(t)]$.

The authors mention V.A.Kondrat'yev and S.A.Chaplygin. There are
15 references: 11 Soviet, 1 Italian, 1 American, 1 Polish and 1 Czech-
Slovakian.

SUBMITTED: December 12, 1958

Card 2/2

AZBELEV, N.V.; TSALYUK, Z.B. (Izhevsk)

Distribution of zeros of solutions of a linear differential
equation of the third order. Mat. sbor. 51 no.4:475-486 Ag '60.

(MIRA 13:9)

(Differential equations, Linear)

AZBELEV, N.V.; TSALYUK, Z.B.

Differential inequalities. Dif. urav. 1 no.4:432-438 1p 165.
(MIRA 18:5)

1. Izhevskiy mekhanicheskiy institut.

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S/020/60/135/003/001/039
C111/C222

18 31100

AUTHORS: Azbelev, N.N., Smolin, I.M., and Tsalyuk, Z.B.
TITLE: An Approximate Method of Constructing Cauchy Function
PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 135, No. 3, pp. 511-514

TEXT: The authors consider the equation
(1) $L[y] = y^{(n)} - \sum_{k=0}^{n-1} g_k(x)y^{(k)} = f(x), y^{(k)}(a) = y_0^{(k)}, k=0, \dots, n-1,$

where g_k and f are continuous on $[a, b]$. Let

$$K(x, s) = \begin{vmatrix} u_0(s) & \dots & u_{n-1}(s) \\ \dots & \dots & \dots \\ u_0^{(n-2)}(s) & \dots & u_{n-1}^{(n-2)}(s) \\ u_0(x) & \dots & u_{n-1}(x) \end{vmatrix} ; \begin{vmatrix} u_0(s) & \dots & u_{n-1}(s) \\ \dots & \dots & \dots \\ u_0^{(n-2)}(s) & \dots & u_{n-1}^{(n-2)}(s) \\ u_0^{(n-1)}(s) & \dots & u_{n-1}^{(n-1)}(s) \end{vmatrix}$$

where $u_k(x) (k=0, \dots, n-1)$ is a fundamental system of the solutions of $L[y] = 0$.
Let $W(x, s)$ be a function n times continuously differentiable with respect

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An Approximate Method of Constructing Cauchy Function

to x for $a \leq s \leq x \leq b$, $W^{(k)}(s, s) = \delta_{k, n-1}$ ($k=0, \dots, n-1$; δ_{ij} - Kronecker symbol). Let the sequence $\{W_i(x, s)\}$ be defined by $W_0(x, s) = W(x, s)$;

$$W_{i+1}(x, s) = W_i(x, s) - \int_s^x W_i(x, t) L[W_i(t, s)] dt \quad (i \geq 1).$$

Theorem 1: Let $|L[W_0(x, s)]| \leq (x-s)^\alpha Q$ and $|K^{(k)}(x, s) - W_0^{(k)}(x, s)| \leq (x-s)^{\alpha+k} P_k$

($k=0, \dots, n$). Then it holds $|K^{(k)}(x, s) - W_i^{(k)}(x, s)| \leq$

$$\frac{P_k \alpha! (Q P_k!)^{2^{i-1}}}{[(2^{i-1}-1)(\alpha+1)+\alpha_k]!} (x-s)^{\alpha+k} \quad (K^{(k)} \text{ and } W^{(k)} \text{ are } k\text{-th}$$

derivatives with respect to x).

Let $z(x)$ ($z^k(a) = y_0^{(k)}$, $k=0, \dots, n-1$) be a function n times continuously differentiable in $[a, b]$. For the approximate solution

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An Approximate Method of Constructing Cauchy Function

$$(3) \quad \tilde{u}(x) = z(x) + \int_a^x W_1(x,s) \{f(s) - L[z(s)]\} ds$$

of the equation (1) then there holds the estimation: if $|f(x) - L[z(x)]| \leq (x-s)^\beta R$, then

$$(4) \quad |\tilde{u}^{(k)}(x) - u^{(k)}(x)| \leq \frac{R \beta! P_k \alpha_k! (Q \beta!)^{2^i - 1}}{[(2^i - 1)(\beta + 1) + \alpha_k + \delta + 1]!} (x-a)^{(2^i - 1)(\beta + 1) + \alpha_k + \delta + 1}$$

As $W_0(x,s)$ it is recommended e.g.

$$W_0(x,s) = \frac{(x-s)^{n-1}}{(n-1)!} + \frac{(x-s)^n}{n!} \varepsilon_{n-1}(s)$$

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C111/C222

An Approximate Method of Constructing Cauchy Function
Some properties of the considered sequence are given. Therefrom there
result the conditions given in (Ref. 3,5) that $K^{(k)}(x,s) > 0$ ($k \leq n$).
There are 5 Soviet references.

X

ASSOCIATION: Izhevskiy mekhanicheskiy institut (Izhevsk Mechanical
Institute)

PRESENTED: June 17, 1960, by S.L.Sobolev, Academician

SUBMITTED: June 14, 1960

Card 4/4

AZBELEV, N.V. (Izhevsk); TSALYUK, Z.B. (Izhevsk)

Necessary and sufficient condition for the boundedness of solutions to a certain class of systems of linear differential equations. Prikl. mat. i mekh. 28 no.1:149-150 Ja-F'64.
(MIRA 17:2)

AZBELEV, N.V.; TSALYUK, Z.B. (Izhevsk)

Integral inequalities. Part 1. Mat.sbor. 56 no.3:325-342 1/2
'62. (MIRA 1514)

(Inequalities (Mathematics))

ACC NR: AR6035017 SOURCE CODE: UR/0044/66/000/008/B060/B060

AUTHOR: Tsalyuk, Z. B.

TITLE: Stability of Volterra integral equations

SOURCE: Ref. zh. Matematika, Abs. 8B285

REF SOURCE: Dokl. i soobshch. nauchn. konferentsiy fiz. -matem. i yestestv. fak. Udmurdk, gos. ped. in-t. Izhevsk, 1965, 8-9

TOPIC TAGS: Volterra equation, solution stability, integral equation

ABSTRACT: An analysis is made of the system

$$x(t) = \int_0^t G(t, s, x(s)) ds + \lambda f(t),$$

where the vector-function $G(t, s, x)$ is continuous and is not decreasing with respect to x , $G(t, s, 0) = 0$, while the vector-function $f(t)$ is continuous and positive.

Theorem: Let there exist a sequence of continuous positive vector-functions $g^m(t)$ and such a number $\epsilon > 0$ that

$$\inf_t \left\{ \frac{g_k^m(t)}{f_k(t)} \right\} > 0 \quad (k=1, 2, \dots, n; m=1, 2, \dots).$$

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UDC: 517.948.33

ACC NR: AR6035017

$$\limsup_{m \rightarrow \infty} \|g^m(t)\| = 0,$$

$$g^m(t) > q \int_a^t O(t, s, g^m(s)) ds \quad (m=1, 2, \dots).$$

Then, for sufficiently small $\lambda > 0$, there exists a limit superior for the solution of the system (1) $x(t, \lambda)$ and $\limsup_{\lambda \rightarrow 0} \|x(t, \lambda)\| = 0$.

V. R. Vinokurov. [Translation of abstract]

[DW]

SUB CODE: 12/

Card 2/2

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16,4600

AUTHOR: Tsalyuk, Z.B.

TITLE: A Remark Concerning the Application of Solvability Conditions in
Chaplygin's Problem to Problems of the Qualitative Theory of
Equations /6

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 134, No. 1, pp. 52-54

TEXT: Let y be the solution of $x = F(x)$, where F is defined on a partially ordered space. If from $z \leq F(z)$ ($z \geq F(z)$) it follows that $z \leq y$ ($z \geq y$), then F has the M - property.

Lemma: Let y_i ($i = 1, 2$) be solutions of $x_i = P_i(x_i)$, where the operators P_i map certain sets N_i into themselves. Let T be an operator mapping

$N_1 \times N_2$ in a partially ordered set R . Let F be an operator in R with the property (M) , where $T(y_1, P_2(x_2)) \leq F(T(y_1, x_2))$, $x_2 \in N_2$. Then

$(Ty_1, y_2) \leq y$, where y is a solution of $x = F(x)$.

The author uses the lemma for the investigation of Volterra's integral

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84575

A Remark Concerning the Application of Solvability Conditions in Chaplygin's Problem to Problems of the Qualitative Theory of Equations S/020/60/134/001/034/038 XX C111/C222

equations. In a KV - lineal (cf. (Ref. 5)) Y he considers the integral equation

(1) $y(t) = \int_a^t K [t,s,y(s)] ds + \psi(t) ;$

the author gives explicit conditions that from the inequation

$z(t) \leq \int_a^t K [t,s,z(s)] ds + \psi(t)$ it follows $z(t) \leq y(t)$ where $y(t)$ is a

solution of (1). These conditions then give the possibility to conclude from the behavior of the solutions of (1) to the behavior of the solutions of the equation

(2) $x(t) = \int_a^t P(t,s,x(s))ds + f(t)$

defined on a Banach space X, e.g. to the boundedness of the solutions of (2), to their uniqueness, to the correctness with respect to small disturbances.

Card 2/3

A Remark Concerning the Application of
Solvability Conditions in Chaplygin's
Problem to Problems of the Qualitative
Theory of Equations

84575

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C111/C222

There are 9 references: 6 Soviet, 2 Polish and 1 Italian.

[Abstracter's note : (Ref. 5) is a paper of L.V. Kantorovich, B.Z. Vulikh
and A.G. Pinsker : Functional Analysis in Semiordered Spaces, 1950] X

ASSOCIATION: Udmurtskiy gosudarstvennyy pedagogicheskiy institut imeni
desyatiletiva UAO (Udmurtskiy State Pedagogical Institute
imeni 10 Years Existence of the UAO)

PRESENTED: April 28, 1960, by S.L. Sobolev, Academician

SUBMITTED: April 7, 1960

Card 3/3

TSALYUK, Z. B. Cand Phys-Math Sci -- (diss) "On conditions ^{for solution} ~~of the solvability~~
of the Chaplygin problem." Kazan', 1958. 6 pp (Kazan' State Univ in V. I.
Ul'yanov-Lenin), 110 copies. Bibliography at end of text (11 titles)
(KL, 14-58, 109)

35211
S/039/62/056/003/003/004
B125/B102

16,4500

AUTHORS: Arbelev, N. V., and Tsalyuk, Z. B. (Izhevsk)

TITLE: On integral equations. I

PERIODICAL: Matematicheskiy sbornik, v. 56(98), no. 3, 1962, 325 - 342

TEXT: It is demonstrated that there are solutions $u_d(t)$ (so-called non-continuable lower (upper) solutions) of the equation

$$x(t) = \int_a^t K(t, s, x(s)) ds + \psi(t),$$

such that the inequality

$$f(t) = z(t) - \int_a^t K(t, s, z(s)) ds - \psi(t) \geq 0 \quad (\psi(t) \leq 0)$$

implies the inequality $z(t) \geq u_d(t)$ ($z(t) \leq u_d(t)$) for $t \in [a, d]$. This theorem is applied to a system of differential equations, which is equivalent to a system of integral equations. There are 17 Soviet-bloc ref-Card 1/2

4

On integral equations. I
erences.

S/032/62/056/003/003/004
B125/B102

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SUBMITTED: June 30, 1960

Card 2/2

7.5. #2 7.10. 1958

AUTHOR: AZEMLER, N.Y. and TSALYUK, S.P. (Ishevsk) 41-1-1/15

TITLE: On Chaplygin's Problem (O zadache Chaplygina)

PERIODICAL: Ukrainskiy Matematicheskii Zhurnal, 1958, Vol 10, Nr 1, pp 1-12
(USSR)

ABSTRACT: The Chaplygin problem is formulated as follows: Let K be a semiordered set and P be an operator defined on K . For the solution y of the operator equation $Py = 0$ an element $\bar{u} \in K$ ($\bar{u} \in K$) is to be constructed which satisfies the inequality $\bar{u} \leq y$ ($\bar{u} \leq y$). The problem is equivalent to the estimation of the error of the approximative solution u of $Py = 0$, i.e. for the given $u \in K$ a $\bar{u} \in K$ ($\bar{u} \in K$) is to be constructed which satisfies the inequality $u - y \leq \bar{u}$ ($u - y \geq \bar{u}$). This problem arises in the qualitative theory of differential equations, in approximation methods etc. In the present paper an abstract theory of the problem is developed and the solution for the case of ordinary differential equations is given. At first it is shown in the general case that the problem is closely connected with the question of the existence of positive inverse operators, in particular

Card 1/2

On Chaplygin's Problem

41-1-1/15

these questions are equivalent for additive operators. Then, under restriction to ordinary differential equations, the necessary and sufficient condition for the positivity of the corresponding operator is established and thereby the problem is solved. Finally an application to approximative solutions of non-linear differential equations is presented. 13 Soviet references are quoted.

REMITTED: 20 November 1956

AVAILABLE: Library of Congress

1. Function-Analysis

Card 2/2

TSALYUK, Z. B.

Stability of systems of Volterra type linear integral equations. Dokl. AN SSSR 150 no.2:268-270 My '63. (MIRA 16:5)

1. Udmurtskiy gosudarstvennyy pedagogicheskiy institut. Predstavleno akademikom L.S.Pontryaginym.
(Integral equations)

AGABABOV, E.A., inzh.; TSAMALASHVILI, M.V., inzh.

Structures for flumes on supercritical inclines. Gidr. i mel.
14 no.4:30-38 Ap '62. (MIRA 15:5)

1. Gruzgiprovodkhoz.
(Irrigation canals and flumes)

TSAMERYAN, P.P. ; VARTANESOV, V.Ye.

Prospecting methods for the Dzhiadar deposit. Izv.AN Arm.SSR.Geol.
i geog.nauki 16 no.1:17-29 '63.

(MIRA 16:5)

1. Institut geologicheskikh nauk AN Armyanskoy SSR.
(Armenia--Prospecting)

TSAMERYAN, P.P.; VARTANESOV, V.Ye.

Assaying of the Dzhindarinskoye deposit. Izv. AN Arm.SSR. Geol.i
geog.nauki 16 no.4/5:123-130 '63. (MIRA 16:12)

1. Institut geologicheskikh nauk AN Armyanskoy SSR.

MANDALYAN, R.A.; PETROSOV, I.KH.; TOMASHYAN, P.P.

Mountain leather from the Upper Jurassic dolomite formation
in the northeastern part of the Armenian S.S.R. Dokl. AN Arm.
SSR 41 no.3:171-176 '65. (MIRA 18:11)

1. Institut geologicheskikh nauk AN ArmSSR. Submitted March 21,
1965.

ARAKELYAN, H.A.; VEGUNI, A.T.; BAL'YAN, S.P.; SAYADYAN, Yu.V.;
ASRATYAN, V.P.; BAGDASARYAN, G.P.; MALKHASYAN, E.G.;
ARUTYUNYAN, A.R.; ARUTCHYAN, A.G., red.; ASLANYAN, A.L., red.;
GOGINYAN, V.Y., red.; GULYAN, E.Kh., red.; KAZARYAN, S.V., red.;
MKRTCHYAN, K.A., red.; TSAMERYAN, P.P., red.

[Study of the geology of the U.S.S.R.] Geologicheskaya izu-
chennost' SSSR. Erevan, Izd-vo AN Arm. SSR Vol.48. No.1.
1964. 157 p. (MIRA 18:6)

TSAMKOV, N. . .

"For the Present the Most Important Task is Contracting," p. 4.
(Haredna Kooperatsiia, No.1., Jan. 1953, Sofiya.)

SO: Monthly List of East European Accessions, Vol.2, No.9, Library of Congress, September
1953, Uncl.

TSAMUTALI, Aleksandr Sergeevich; GORELIK, I.M., red.; ABBASOV, T.,
tekhn. red.

[Strengthening the economy of cotton-growing collective farms]
Ukreplenie ekonomiki khlopkovodcheskikh kolkhozov. Tashkent,
Gosizdat UzSSR, 1962. 68 p. (MIRA 16:5)
(Uzbekistan--Collective farms--Finance)
(Uzbekistan--Cotton growing)

TSAN, T. T.

2

35072

3/712/60/023/000/015/014
D213/B501

3.1540 (11-1137)
3.1510 (1114)

AUTHORS: Abramenko, S. I., Dubov, E. Ye., Ogir', M. B., Stechenko, H. Ye., Shaposhnikova, Ye. P. and Tsan, T. T.

TITLE: The photometry of solar flares

SOURCE: Akademiya nauk SSSR. Krymskaya astrofizicheskaya observatoriya. Izvestiya, v. 25, Moscow, 1960, 344-361

TEXT: A continuation of experimental work on the compilation of a catalogue of photometric curves for flares and a study of the importance of the various factors which influence the shape of these curves. The authors report photometric curves for 4 1957 flares and 10 1958 flares of importance 2. The observations were carried out using the WF-1 (KG-1) coronagraph and an interference polarization filter centered on the H α line. In May 1958, a wide-angle filter [3] WF-44 (GOI IE-44) having a bandwidth of 0.35 μ , was introduced into the apparatus. A detailed description is given of isolated flares and their development curves. The results are com-
Card 1/2

The photometry of solar flares

3/117/10/023/000/013/011
D*14/D301

pared with those obtained with the chromospheric telescope (CT) (AFR-2) (Simcik) and the AFR-2 telescope at the IAS AN USSR (IAO UkrSSR (Kiyev)). A description is also given of the contributions due to secondary transmission maxima of the filters to a number of effects responsible for the shift of the main peak-band. A detailed examination of the large number of graphs revealed that the photometric curves for a given flare may differ from instrument to instrument. Differences of the order of 25 - 35% are common. However, these curves may still be useful for astrophysical purposes and, therefore, the authors consider it essential to continue their work on compiling a catalogue of photometric curves of flares obtained at different observatories during the 1971. The present paper contains over 100 such curves. Acknowledgments are expressed to N. V. Godovnikov for assistance in preparing the material. There are 34 figures, 2 tables and 5 Soviet-bloc references.

SUBMITTED: May 1959

Card 2/2

37075

S/712/60/023/000/003/014
D218/D301

3,1540 (also 1137)

AUTHORS: Mustel', E. R. and Ts'an, T. T.

TITLE: Behavior of the bright reversal in the center of H and K Ca II lines in the region of a sunspot

SOURCE: Akademiya nauk SSSR. Krymskaya astrofizicheskaya observatoriya. Izvestiya, v. 23, Moscow, 1960, 299-303

TEXT: A continuation of earlier work. The authors report a more detailed study of the transition from double H and K lines of Ca II into single lines. To obtain these more detailed results, the profiles of the K line were investigated at different distances from the sunspot center. The spectra employed were obtained with the solar tower telescope at the Crimean Astrophysical Observatory with a dispersion of 0.192 A/mm. Photometric analysis of the K line for two sunspots reveals in a figure the absolute intensity I_{λ} as a function of distance from the sunspot center. It is found that this intensity has a minimum at the center of the umbra and

Card 1/2

Behavior of the ...

S/712/60/023/000/009/014
5218/5301

increases on either side. These results can be explained in terms of the Evershed effect. Another figure shows the photometric tracing of the K line at different distances from the sunspot center. There are 5 figures and 2 Soviet-bloc references. *

SUBMITTED: May 12, 1959

Card 2/2 .

KAKUSHIYAMA, A.M.; KAKUDA, G.J.

Using the Trefftz method in solving some problems in structural
mechanics. Soviet. AN Bruc. No. 23 no.2:350-366 By 145.
(MIRA 18:9)

KHUNDADZE, Georgiy Romanovich; TSANAVA, Georgiy Melitonovich;
GROZIANI, Chirchiko Vasil'yevich; KAKMATAVRIISHVILI,
Otar Grigor'yevich

[Anesthesiology: general part] [Anesteziologiya; obshchaia
chast'. TSodna] 1964. 430 p. [In Georgian]
(LIRA 18:8)

KAKHIANI, V.V.; GAGULASHVILI, A.D.; TSANAVA, G.M.

Clinical aspects and treatment of a pelvic fracture. Doct.
AN Gruz. SSR 30 no.3:367-372. M. '63. (MIRA 17:6

J. Tbilisakiy gosudarstvennyy institut usoverhenstvovaniya
vrachey i Bol'nitsa skoroy pomoshchi, Tbilisi. Predstavleno
akademikom K.D. Erstavli.

KHUNDADZE, G.R., prof.; TSANAVA, G.M., dotsent

Tracheobronchoesophagoscopy under intravenous barbiturate anesthesia under conditions of apnea. Khirurgiia no.12:27-29 '61.

(MIRA 15:11)

1. Iz kafedry anesteziologii (zav. - prof. G.R. Khundadze)

Tbilisskogo instituta usovershenstvovaniya vrachey.

(BRONCHOSCOPY)

(ESOPHAGUS--EXPLORATION)

(BARBITURATES)

(APNOEA)

KHUNDADZE, G.R.; TSANAVA, G.M.; GOROZYANI, Ch.V.; MAMAMTAVRISHVILI, O.G.

Single-stage bronchoscopy and bronchography under anesthesia.
Khirurgiia 36 no.7:89-92 Je '60. (MIRA 13:12)
(BRONCHI--RADIOGRAPHY) (BRONCHOSCOPY)

KHUNDADZE, G.R.; TSANAVA, G.M.

Concerning pneumonectomy. Trudy Tbil. GIDUV 6:59-68 '62.
(MIRA 16:2)

(LUNGS—SURGERY)

TSANAVA, N.Ye., inzh.; MATVEYENKO, D.D., slesar' masterskikh (stantsiya ~~.....~~ Bendery).

Creative work of the Bendery track worker inventors. Put' i put.
khoz.no.12:13-16 D '57. (MIRA 10:12)

1. Nachal'nik Benderskoy distantzii puti Moldavskoy dorogi.
(Bendery--Railroads--Maintenance and repair)

8 (6)

SOV/112-57-5-9988

Translation from: Referativnyy zhurnal, Elektrotehnika, 1957, Nr 5, p 52 (USSR)

AUTHOR: Birkaya, A. F., Tsanova, V. O.

TITLE: Bank-Protection Structures for a Flat Section of the Rioni River
(Beregozashchitnyye sooruzheniya dlya ravninnogo uchastka r. Rioni)

PERIODICAL: Tr. Gruz. n.-i. in-ta gidrotekhn. i melior., 1956, Nr 4 (17)
pp 168-179

ABSTRACT: During the last 15 years, the banks of the Rioni river have eroded at a stretch 42 km long. The largest scours are 50-175 m wide (up to 11.7 m per year). The intensive annual bank erosion can be explained by a low stability of soils (loams) and by a high rate of flow in the river bed (0.3-1.75 m/sec on the average, sometimes up to 2.0-2.2 m/sec). Results of an analysis of the behavior of bank-protection structures are reported for a flat (leveed) section of the Rioni river with a view to finding the most rational types and shapes of the structures. The behavior of the following structures

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SOV/112-57-5-9988

Bank-Protection Structures for a Flat Section of the Rioni River

was analyzed: (1) a number of solid-masonry spurs; (2) a guard spur consisting of a rock-filled wooden tripod; (3) rock-and-brush work of the "Kolkhida belt" type; (4) a belt of branchy trees; (5) submerged directing groins; (6) transverse curtains from branchy trees; (7) rock-and-brush spurs, etc. Longitudinal bank belts (particularly the "Kolkhida belt") have been found to be the most suitable type of bank-protection structure; elements of such belts protrude only slightly into the bulk of the stream and do not cause strong local scours.

Yu. M. S.

Card 2/2

15-57-7-10019
Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 7,
p 187 (USSR)

AUTHORS: Birkaya, A. F., Tsanava, V. O.

TITLE: Bank-Protective Structures for the Sections of the
Rioni River Flowing Through the Plain (Beregozash-
chitnyye sooruzheniya dlya ravninnogo uchastka r.
Rioni)

PERIODICAL: Tr. Gruz. n.-i. in-ta gidrotekhn. i melior. 1956,
Nr 4(17), pp 168-179

ABSTRACT: For twenty years, from the time both sides collapsed,
the Rioni River, where it crosses the plain, has en-
croached on its levees and partially destroyed them.
In separate sections the erosion amounts to 11.7 m in
a year. A danger of flooding has arisen for the re-
claimed lands of Kolkhida. The banks are composed, in
the upper part of a cover, of sandy clay and, in the

Card 1/3

15-57-7-10019

Bank-Protective Structures (Cont.)

lower part, of silty-sandy clay. The rocks are weak. The authors analysed the behavior of all structures for the purpose of determining the most practical bank-protecting measures. It has been shown that all the protections that have been applied are unsatisfactory, except for the 100 m long Kolkhida belt, first built in 1940. This Kolkhida structure has needed no repairs or maintenance for 15 years. It consists of an aggregate of stone and dry branches with a network of freshly cut branches and stakes. The whole has a serrate outline. With silting and strengthening of the root system, the structure is converted in time to a safely bound mass. Riprap-brush spur dikes did not work satisfactorily chiefly because of the great spacing between spurs. The spacing between spurs may be calculated by the formula $L = b(3\sin\alpha + \cos\alpha)$, where L is the distance between spurs along a straight line, b is the effective (working) length of the spur, and α is the angle between the line of the spur and the direction of flow. If the bank is concave, the distance between spur dikes is $L' = L\sqrt{16h^2/3}$, where L' is the distance

Card 2/3

15-57-7-10019

Bank-Protective Structures (Cont.)

between spur dikes along the arc of the concave bank, and L is the length of the chord corresponding to the arc L' or the distance between spur dikes where erosion has produced a straight stretch of river, and h is the perpendicular distance from the midpoint of the segment (arc) to the chord. Distance h is determined by the formula $h = R - \sqrt{R^2 - L^2/4}$, where R is the radius of curvature of the eroded bank. The most practical application of bank binding (such as the Kolkhida structure) may vary according to the availability of construction material.

Card 3/3

M. P. Samokhvalova

TSANAVA, V.O.

Results of laboratory investigations of the work of a system of compact and permeable shore protecting spurs. Trudy GruzNIIGiM no.20:225-230 '58. (MIRA 15:5)

(Shore protection)

TSANAVA, V.P.

Utilization of nitrogen fertilizers by the tea plant on the Red soils
of the Georgian S.S.R. Agrokhimija no.4:69-76 Ap '64. (MIRA 17110)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut chaya i sub-
tropicheskikh kul'tur, Makharadze, Anaseuli.

TSARDKOV, M. I.

"Basic Boundary Problems in the Theory of Steady State Elastic Vibrations for Contours With Angular Points and for Surfaces With Angular Lines." *Georgian Phys-Math Sci*, Tbilisi State U, Tbilisi, 1954. (*RZhMekh*, Mar 55)

SO: Sum. No. 670, 29 Sep 55--Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

- 715. Бурчуладзе Теодоз Ваз-
Амирович. Академические вопро-
сы функциональной теории инва-
риантного функционального урав-
нения второго рода. 1955. 111 с.
Защ. 1956, 18.2.
- 716. Везуа Навс Несторович.
Распространение импульса в кванто-
вой теории. 1957. 5 с.
Защ. 1957, 11.10.
- 717. Габеладзе Николай Алек-
сеевич. Приближенные коммутации в ге-
неализованном пространстве. 1955, 66 с.
(Кубанский пед. инст. Тр. Кубанского
т. 14, Сообщ. АН РСФСР, т. 15, № 10,
1955, 26.12.
- 718. Гавава Костянтин Лу-
инович. О некоторых предельных теоремах
для двойных рядов. 1957. 60 с.
Защ. 1957, 14.9.
- 719. Герселин Теодоз Георгие-
вич. О граничных значениях функций
сплошной и дискретной математики
и их приложениях. 1954. 111 с.
Защ. 1954, 27.11.
- 720. Горгалдзе Алексей Яков-
левич. Об одном предельном методе по-
лучения приближений в теории
уравнений. 1937. 9, 10.
Защ. 1937, 9, 10.
- 721. Гулаш Шота Несторович.
О теоремах типа Абеля. Сузун, 1955.
56 с. (Сузунский пед. инст.).
Защ. 1956, 7.4.
- 722. Магерадзе Леван Геор-
гиевич. Некоторые основные грани-
чные значения функции Дирихле
и ее приложения. 1939. 68 с.
Защ. 1939, 23.6.
- 723. Меликвериджан Яков Ге-
оргиевич. О предельных значениях
дифференциального уравнения гипербо-
лического типа с переменными коэффици-
ентами в случае двух независимых пере-
менных (Тр. Тбилис. мат.-мех. инст. т. 4,
1964). Защ. 1964, 17.5.
- 724. Папарас Никанор Никола-
евич. Исторические вопросы гипер-
болического уравнения в области сово-
купности. 1941. 107 с. (Тр. ТГУ, т. 48, 1943, т. 54, 1954,
Защ. 1948, 24.4).
- 725. Симонов Вазван Тара-
сович. Предельные полурасходимости ал-
гебр Ан с двумерными матричными
разностями подгруппы. 1955. 137 с.
Защ. 1956, 10.3.
- 726. Ткавадзе Гава Николае-
вич. О внутренних пересечениях гипер-
болического уравнения в области прост-
ранства. 1954. 105 с. (Тбилисский пед. ин-
ст.). Защ. 1954, 27.5.
- 727. Хавава Григорий Яков-
левич. К теории конформных отобра-
жений двулистных областей на торах.
1937. 107 с. (Тр. Тбл. мат.-мех. инст.).
Защ. 1938, 17.5.
- 728. Хавава Зина Николае-
вна. Решение задачи Клебана Сибера
методом теории функций комплексного
применения. Баку, 1939 (Азерб. гос. ун-
верситет). Изд. АН Азерб. ССР, 1949.
Защ. 1940, 22.4.
- 729. Харавоз Леван Феофи-
лович. Некоторые вопросы теории алгебраиче-
ских дифференциальных уравнений. 1942.
59 с.
Защ. 1942, 26.2.
- 730. Хавава Александр Рубе-
нович. Об одной задаче интегрирования
уравнений Фредгольма III по Якоби. Б.
т. 6, г. 52 с.
Защ. 1949, 25.4.
- 731. Цандков Михаил Миз-
аевич. Основы граничных задач
теории установившихся упругих коле-
баний для областей с угловыми точками
и для полостей с угловыми линиями.
1964). Защ. 1954, 29.6.

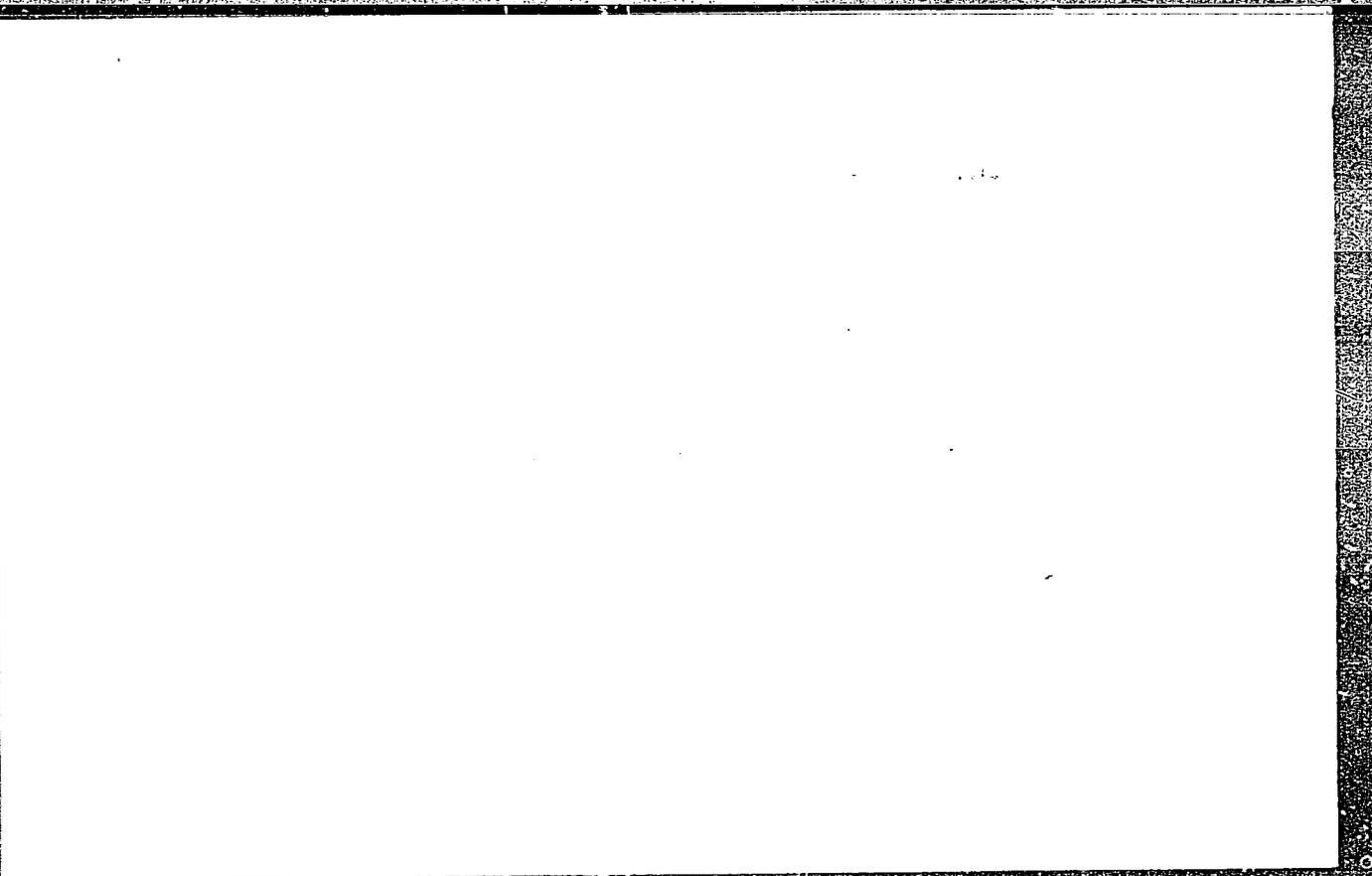
814

Dissertation for Degree of
Candidate Mathematical Sciences

Def. at
Tbilisi State U.

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001756910014-7



APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001756910014-7"

TSANDER, A.

For the good of mankind. Tekh.mol. 30 no.9:28-29 '62.
(MIRA 15:9)
(Tsander, Fridrikh Arturovich, 1887-1933)

1454

ON THE HUY-FONG PROBLEM IN QUANTUM
MECHANICS

11
12

TSANDER, A.F.

*RT-749 (On the many-body problem in quantum mechanics) K probleme mnogikh chastits v kvantovoi mekhanike.

DOKLADY AKADEMII NAUK SSSR, 90(5): 761-764, 1953.

"APPROVED FOR RELEASE: 03/14/2001

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TSANDER, A. F.

11770 On the Many-Body Problem in Quantum Mechan-
ics. A. F. Tsander, National Science Foundation Translation,
no. 134, Dec. 1953, 4 p. (From Doklady Akademii Nauk SSSR,
v. 80, 1953, p. 761-764.)
Mathematical investigation of atomic nuclei. 5 ref.

10-14-54
RMJ

TSANDER, A. F.

PA 7/4788

USSR/Nuclear Physics - Electron Theory May 48
Nuclear Physics - Isotopes

"New Calculation of Isotopic Displacement," D. D.
Ivanenko, A. F. Tsander, Moscow State U, 4 pp

"Zhur Eksper i Teoret Fiz" Vol XVIII, No 5

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are defined by using electronic functions which con-
sider the finite size of the nucleus.

7/49788

C. Q. TSANDER, A.F.
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3a.

New calculation of the isotope shift. D. D. Ivanenko and A. P. Tsander (Moscow State Univ.). *Zhur. Eksp. Teoret. Fiz.* 18, 434-7(1949).—The shift is calcd. for $nS_{1/2}$ electrons by soln. of the Dirac equation for the electron within and outside the nucleus, i.e. by electron functions taking into account the finite dimensions of the nucleus, without reference to the perturbation method, for a const. and an oscillator potential, the latter representing the interaction between an electron and a uniformly charged Thomson sphere. The results are numerically somewhat different from those of Rosenthal and Hirt (C.A. 20, 5443). The decrease of the probability of K -capture as compared with that calcd. for a point nucleus is calcd. for nuclei no. 27 and 87. N. Thon

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(PITUITARY GLAND neopl)
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(DIABETES MELLITUS compl)
(HYPERTENSION compl)

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(GOITER exper.)

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Abstract: [Author's Russian summary] The case, conditioned genetically by chromatine-positive test, was characterized by feminized forms of the body and bilateral gynecomastia. The results of biopsy disclosed the typical picture of the syndrome. In the histological picture, massive hyperplasia of Leidig's cells is pronounced.

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